

In Section 5 of the Office Action, the Examiner rejected claims 17-20 under 35 U.S.C. §102(e) as being anticipated by Diede et al. (U.S. Patent No. 6,198,424). Applicant respectfully believes that the rejected claims are allowable even in view of the cited reference.

Independent claim 17 is directed to a radar level transmitter for providing level detection of materials in a container. The radar level transmitter includes calculating "a first threshold value as a function of the transmit pulse amplitude." In contrast, as recognized by the Examiner, Diede looks at the reflected fiducial pulse 310. [Col. 4, lines 19-22]. This is not the transmit pulse amplitude as stated in claim 17.

The Examiner contends that it is "inherent that the threshold value is also calculated as a function of the transmit pulse amplitude." Applicant respectfully disagrees. "That which may be inherent is not necessarily known." In re: Spormann, 363 F.2d 444, 448, 150 USPQ 449, 452, (CCPA 1966). In particular, the cited sections of Diede et al. (column 5, lines 14-25 and column 6, lines 23-28) refer to the calculation of a dielectric constant of a first product rather than a threshold value.

Because Diede et al. fail to disclose or suggest the invention, the Examiner relies upon Applicant's disclosure to discern the "obviousness" of the claim. Applicant submits that such use of hindsight is improper. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (Even seemingly simple changes require a finding of a suggestion in the prior art to make the modification to avoid the improper use of hindsight).

Accordingly, Applicant submits that claim 17 is allowable and requests that the rejection be withdrawn. Additionally, Applicant submits that claims 18-20 are allowable since they depend from allowable base claim 17, and request that the rejections be withdrawn.

In Section 6 of the Office Action, the Examiner rejected claims 17-20 under 35 U.S.C. §102(a) as being anticipated by International Publication No. WO 00/43806 to Diede. Applicant respectfully disagrees with the Examiner's assessment of the cited reference.

The cited reference is the corresponding International Application relating to Diede et al. described above. As above, Applicant submits that Diede utilizes the reflected fiducial pulse 310 in setting the threshold value for detection of the pulse. Additionally, as described above, Applicant disagrees with the Examiner's argument that Diede inherently teaches the calculation of a threshold value as a function of the transmit pulse amplitude based upon the relationship described at page 9, line 23 to page 10, line 5 and page 10, lines 19-23.

Nowhere in Diede is there any disclosure or suggestion of "a threshold calculation module . . . adapted to calculate a first threshold value as a function of the transmit pulse amplitude and properties of the materials", as described in claim 17. Instead, the Examiner improperly relies upon the teachings of Applicant's disclosure to discern the obviousness of the claim. Accordingly, Applicant believes that independent claim 17 is allowable, and requests the rejection be withdrawn. Additionally, Applicant submits that claims 18-20 are allowable since they depend from allowable base claim 17, and requests that the rejections be withdrawn.

In the Office Action, the Examiner also rejected claims 1, 2, 4, 5, 7, 8, 10-13 and 16 under 35 U.S.C. §103(a) as being unpatentable over International Publication No. WO 00/43806 to Diede in view of McEwan (U.S. Patent No. 5,609,059). Applicant respectfully disagrees with the Examiner's assessment of the cited references.

The Examiner found Diede to teach the idea of setting the threshold value for pulse as a function of the pulse's

reflected amplitude, but did not teach incorporating the dielectric parameter of a first material and a correction factor in calculating the first reflected pulse amplitude. The Examiner found McEwan to teach a calculation of a magnitude of a reflected pulse as a function of the dielectric constant of the first material, and the dielectric of the second material at column 6, lines 29-34. Furthermore, the Examiner found that the reflected pulse measurements are "corrected by taking the measurements between the fiducial pulse and the reflection pulse relative to the antenna, or launcher plate, rather than to the transceiver" at column 6, lines 49-53. Applicant respectfully disagrees with the Examiner's assessment of the cited references.

Applicant agrees with the Examiner that Diede fails to teach a method of calculating a first threshold value as a function of a "dielectric parameter of a first material and a correction factor." Additionally, Applicant submits that Diede fails to disclose the setting of a first threshold value as a function of an estimated first reflected pulse that is calculated using "a reference amplitude of a transmitted microwave pulse" or a second dielectric parameter having a value corresponding to a dielectric of a second material located below the first material". Additionally, neither of the cited references disclose a step of "setting a first threshold value as a function of the . . . first reflected pulse amplitude", as described in independent claims 1 and 10.

Additionally, McEwan is unrelated to the automatic setting of threshold values for use by a microwave level transmitter. Moreover, McEwan fails to disclose any use of a calculated reflected pulse amplitude to set a threshold value. Additionally, the cited "correction factor" of McEwan at column 6, lines 49-53 is unrelated to a threshold calculation. Instead, the cited "correction factor" relates to the reduction of errors and drift that are introduced by the cable 16 due to the taking

of measurements between the fiducial pulse and the reflected pulse relative to the launcher plate 18 rather than to the transceiver 12. Therefore, McEwan fails to disclose or suggest the use of a correction factor in the calculation of a first threshold value as described in independent claims 1 and 10.

Accordingly, Applicant submits that independent claims 1 and 10 are allowable, and requests that the rejections be withdrawn. Additionally, Applicant submits that claims 2-9 and 11-16 are allowable as being dependent from allowable base claims 1 and 10 respectively.

In Section 7 of the Office Action, the Examiner rejected claims 3, 6, 9, 14 and 15 under 35 U.S.C. §103(a) as being unpatentable over Diede in view of McEwan and further in view of U.S. Patent No. 5,500,649 to Mowrey et al. As explained above, Applicant respectfully believes that independent claims 1 and 10 are in condition for allowance even in view of Diede and McEwan. Accordingly, Applicant submits that claims 3, 6 and 9 are allowable as being dependent from allowable base claim 1, and requests that the rejections be withdrawn. Likewise, Applicant submits that claims 14 and 15 are allowable as being dependent from allowable base claim 10, and requests that the rejections be withdrawn.

In view of the above comments and remarks, it is believed that the present application is in condition for allowance. Consideration and favorable action is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

Judson K. Champlin, Reg. No. 34,797
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

JKC/djb